

SERIAL NO. 10/617,270

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Amendments to the Specification

Amend the first partial paragraph on page 7, lines 1-19 in the following fashion:

"probe are part of means for maintaining hybrid reactors 10 at effective hybrid polymerization temperatures and means for maintaining hybrid reactors 10 at sub-reflux polymerization gage pressures, respectively to cause polymerization of a portion or all of the hybrid reactor monomers into a polymer. The effective hybrid polymerization temperatures depend upon the type and quantity of hybrid reactor monomers, molar ratios of various monomers, type and amount of hybrid reactor initiators, type of polymerization medium, the rate at which the hybrid reactor mixture is added to reactor 10, rate at which hybrid reactor contents are taken out of reactor 10 and the sub-reflux polymerization gage pressures being maintained within reactor 10. Generally, effective hybrid polymerization temperatures range from 80°C to 400°C, preferably from 120°C to 300°C, and more preferably from 140°C to 220°C when sub-reflux polymerization gage pressures range from ~~[0.4 to 2.86]~~ 0 to 2.76 MPa (0 to 400 psig), preferably from ~~[0.4 to 0.74]~~ 0 to 0.69 MPa (0 to 100 psig). It should be noted that the hybrid operating pressures used in the present invention to make a polymer of a desired molecular weight range are far less than what has been tried before. As a result, the process of the present invention can be operated under safer working conditions."

Amend the first full paragraph on page 10, lines 5-31 in the following fashion:

"Batch reactor 32 is made of a chemically inert material, such as stainless steel, and is rated to operate at reflux gage pressures, which is typically at atmospheric pressure. The size of reactor 32 is chosen to meet the desired rate of making the polymer as discussed above. Reactor 32 is provided with a conventional temperature probe 34, such as a thermocouple, for monitoring the temperature of a batch reactor reaction mixture comprising one or more batch reactor monomers and one or more batch reactor initiators

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in reactor 32. Reactor 32 is also provided with a conventional pressure probe, such as a load cell positioned in the dome of reactor 32 (not shown), for monitoring the pressure inside reactor 32. Thus, temperature probe 34 and the pressure probe are part of means for maintaining batch reactors 32 at effective batch polymerization temperatures and means for maintaining batch reactors 32 at reflux polymerization gage pressures, respectively to cause polymerization of a remaining portion of the hybrid reactor monomers into the polymer and to cause polymerization of batch reactor monomers into the polymer. The effective batch polymerization temperatures depend upon the type and quantity of hybrid reactor and batch reactor monomers, molar ratios of various monomers, type and amount of batch reactor initiators, type of polymerization medium, the rate at which the hybrid reactor content are conveyed to reactor 32, the rate at which batch reactor mixture is added to reactor 32, and the reflux polymerization gage pressures being maintained within reactor 32. Generally, effective batch polymerization temperatures range from 80°C to 300°C, preferably from 100°C to 250°C, and more preferably from 120°C to 200°C when reflux polymerization gage pressures range from ~~[0.1 to 2.47]~~ 0 to 2.07 MPa (0 to 300 psig), preferably from ~~[0.1 to 0.79]~~ 0 to 0.69 MPa (0 to 100 psig)."